GSMA-ITU Digital Societies Policy Forum 2015
National Broadband Policies for Smartly Digital Asia-Pacific-2020

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Bangkok

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ITU Regional Office for Asia and the Pacific

Agenda

- ICT Development Trends
- ITU Initiatives on Broadband
- National Broadband Plans
- Broadband Infrastructure & Applications
- Conclusions

ITU: A Brief Overview

Founded in 1865

A specialized agency of the UN with focus on Telecommunication / ICTs

193 Member States
567 Sector Members
159 Associates
60 Academia

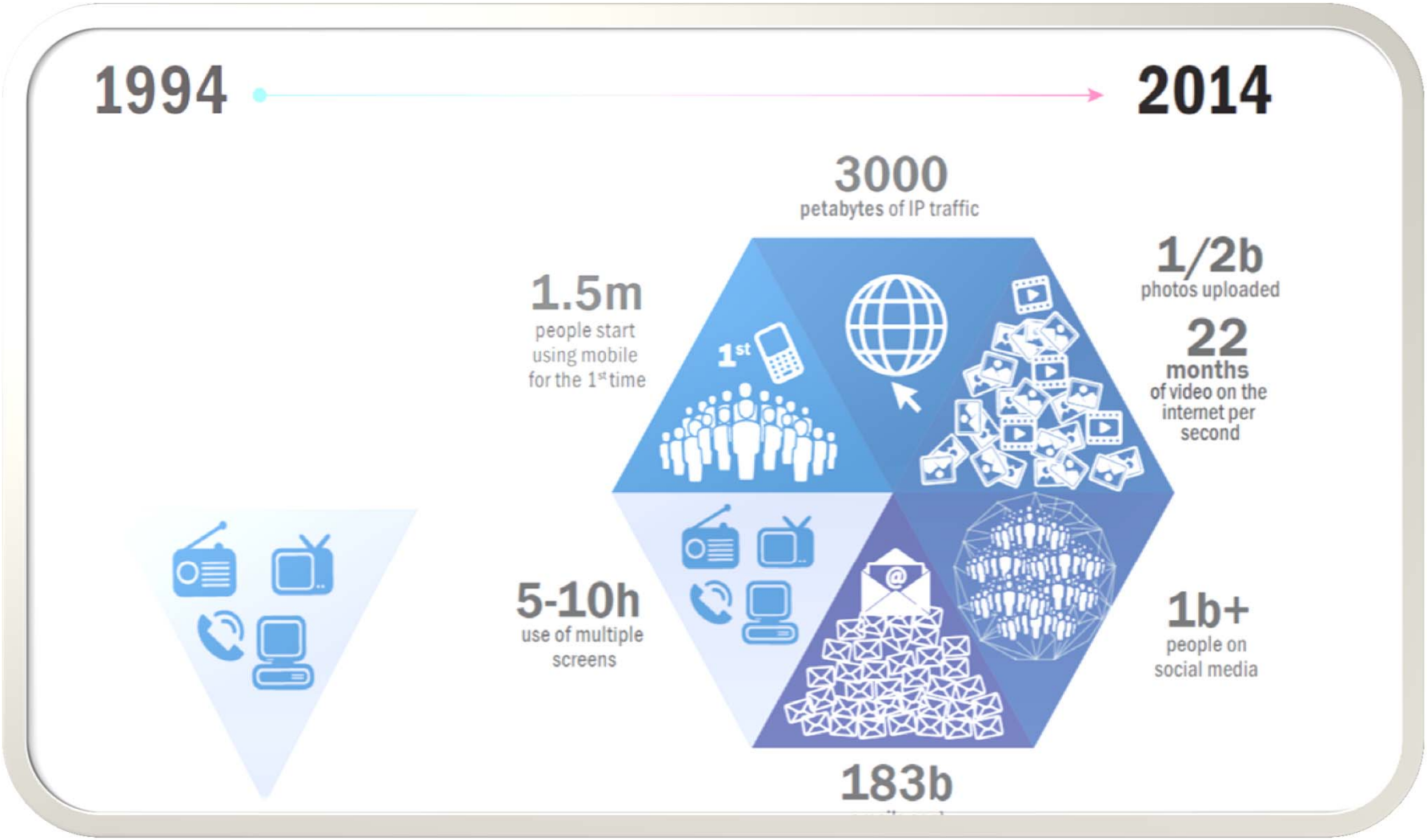
Headquartered in Geneva,
4 Regional Offices
7 Area Offices.

ITU-R: ITU's Radio-communication Sector globally manages radio-frequency spectrum and satellite orbits that ensure safety of life on land, at sea and in the skies.

ITU-T: ITU's Telecommunication Standardization Sector enables global communications by ensuring that countries' ICT networks and devices are speaking the same language.

ITU-D: ITU's Development Sector fosters international cooperation and solidarity in the delivery of technical assistance and in the creation, development and improvement of telecommunication/ICT equipment and networks in developing countries.

A Day in Digital World



ICT Services Uptake

Global, 2014

Mobile cellular subscriptions:
- Almost 7 billion

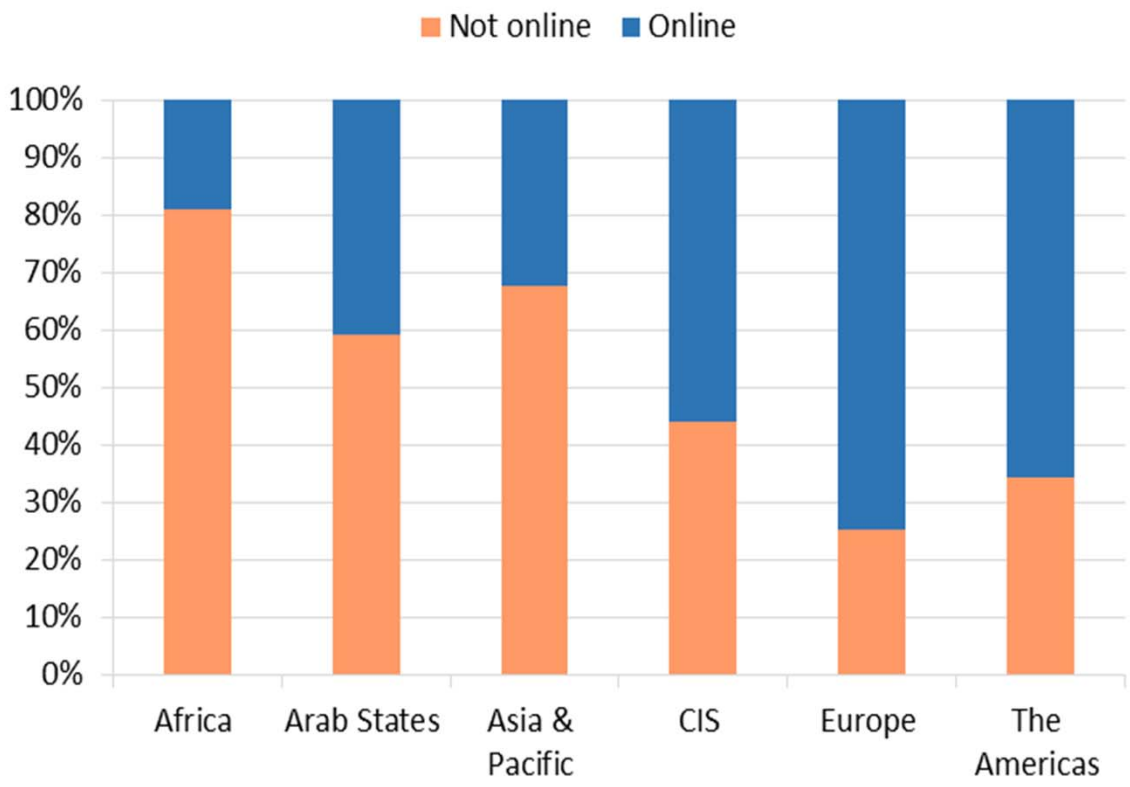
Mobile broadband penetration:
- 84% developed countries
- 21% developing countries

Fixed broadband penetration:
- 27.5 % developed countries
- 6 % developing countries

- Almost 3 billion **people online** (individuals using the Internet)

Who's online?

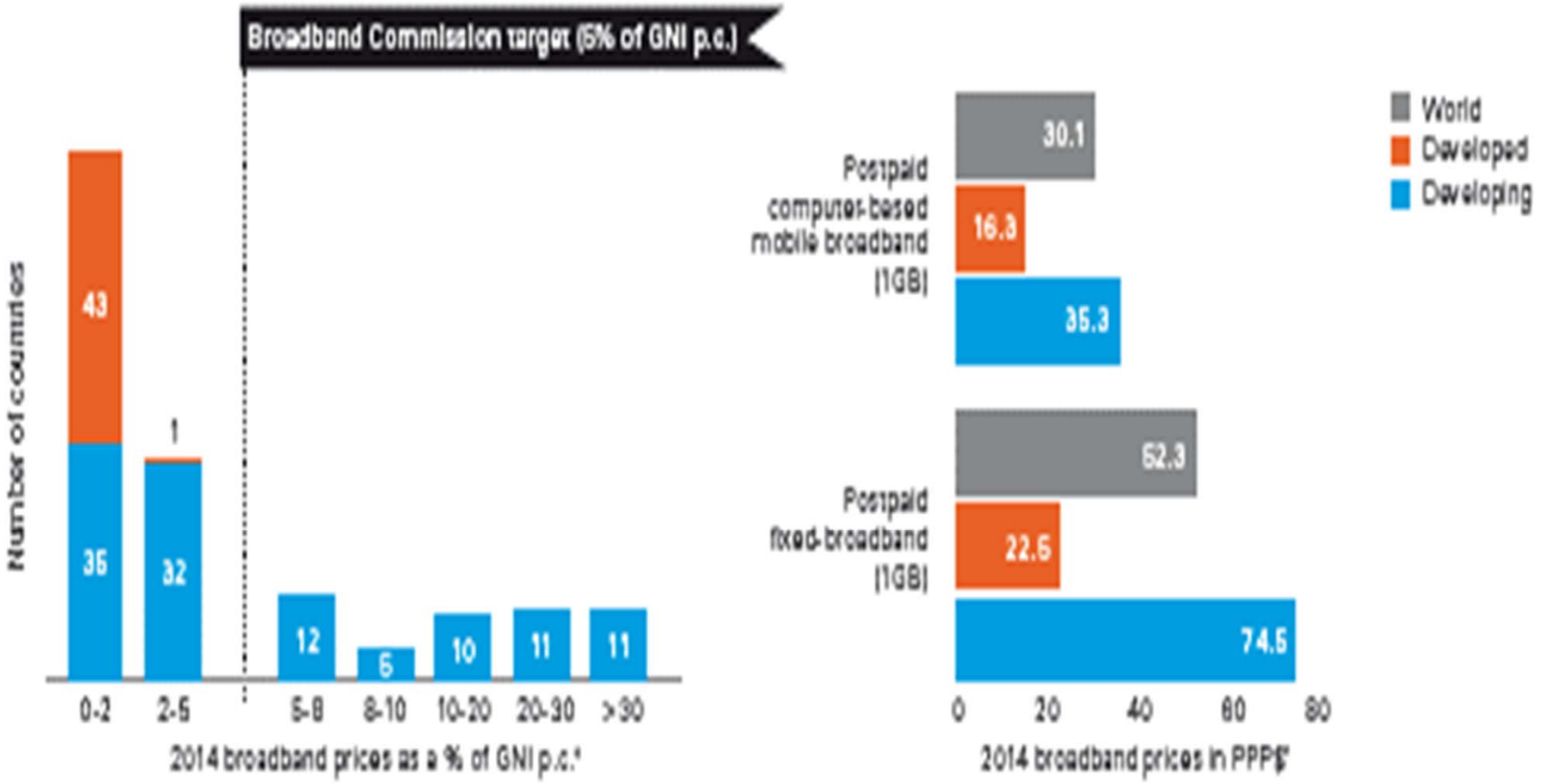
By region, 2014



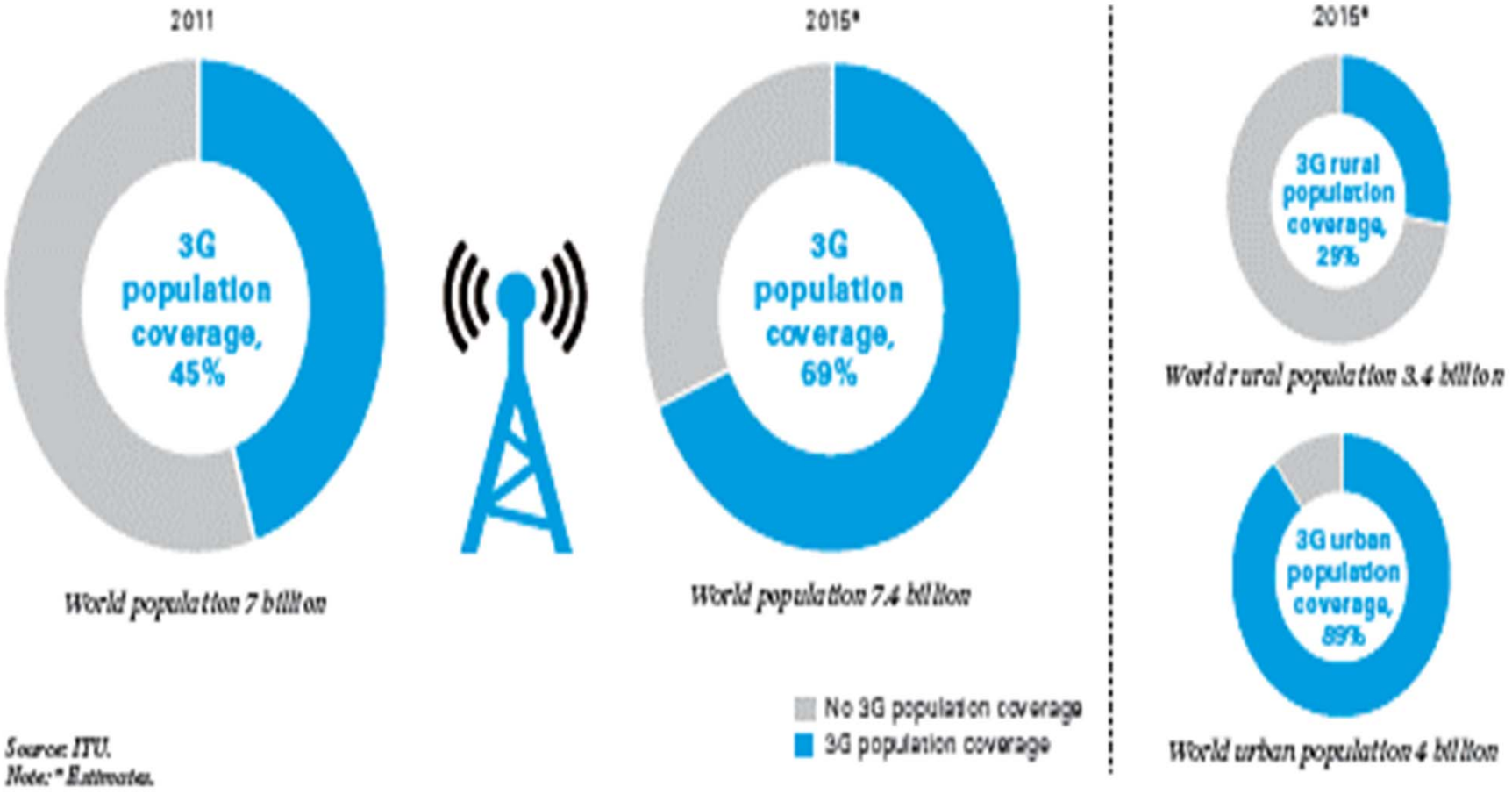
Source: ITU World Telecommunication/ICT Indicators database

Broadband now affordable in 111 countries

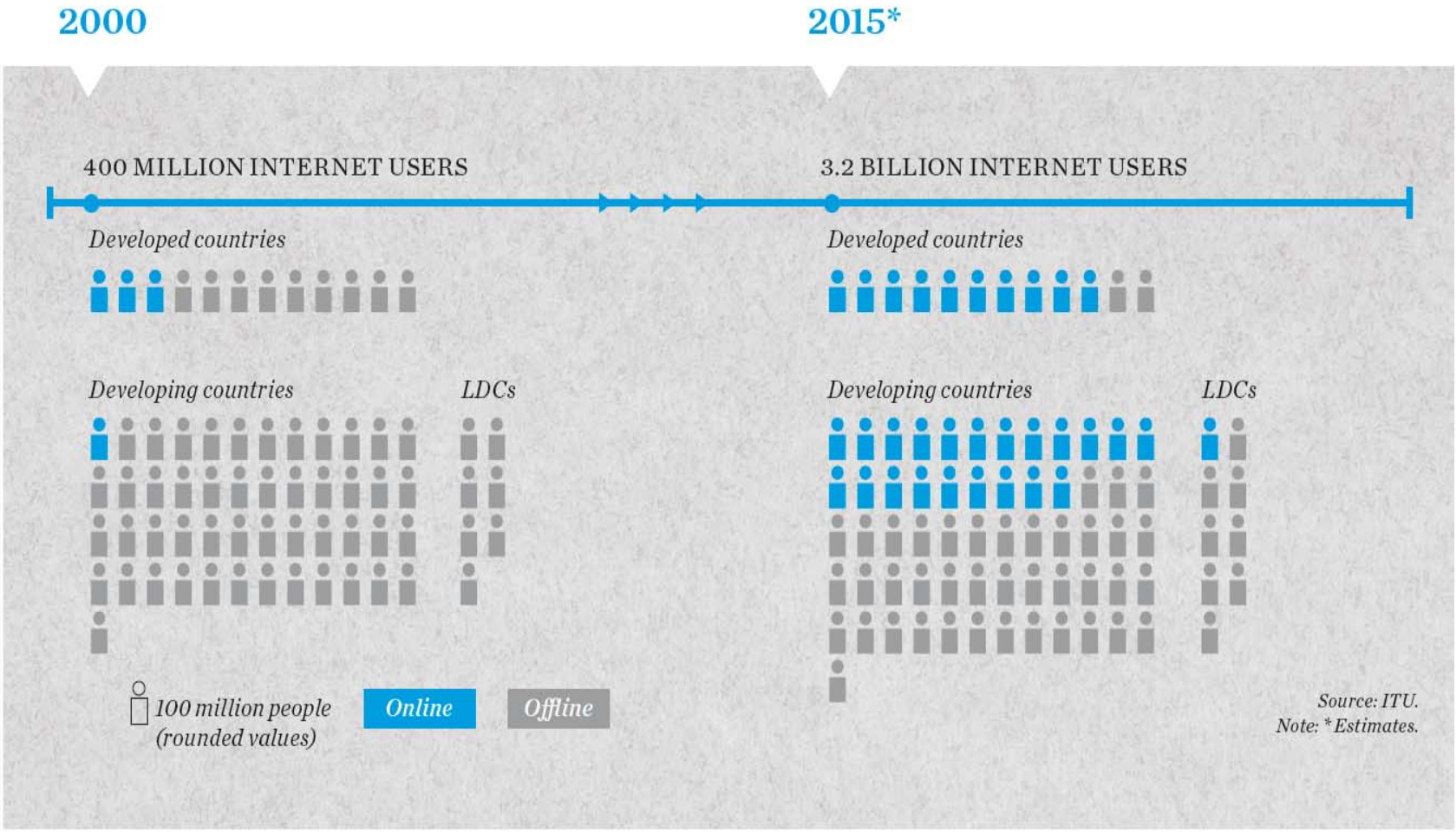
MBB less expensive than FBB



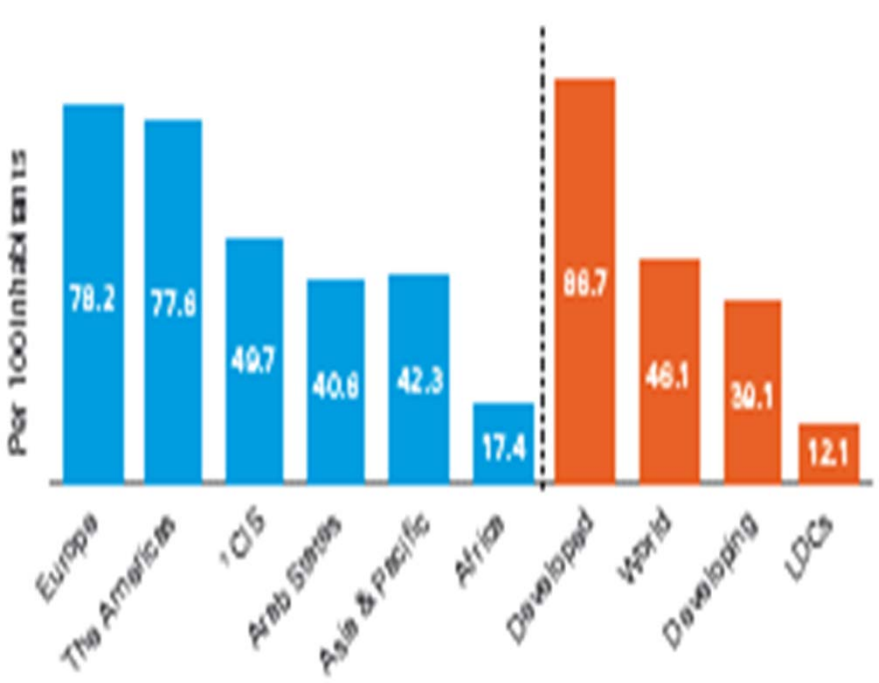
3 G Mobile Broadband Coverage: Extending in Rural Areas

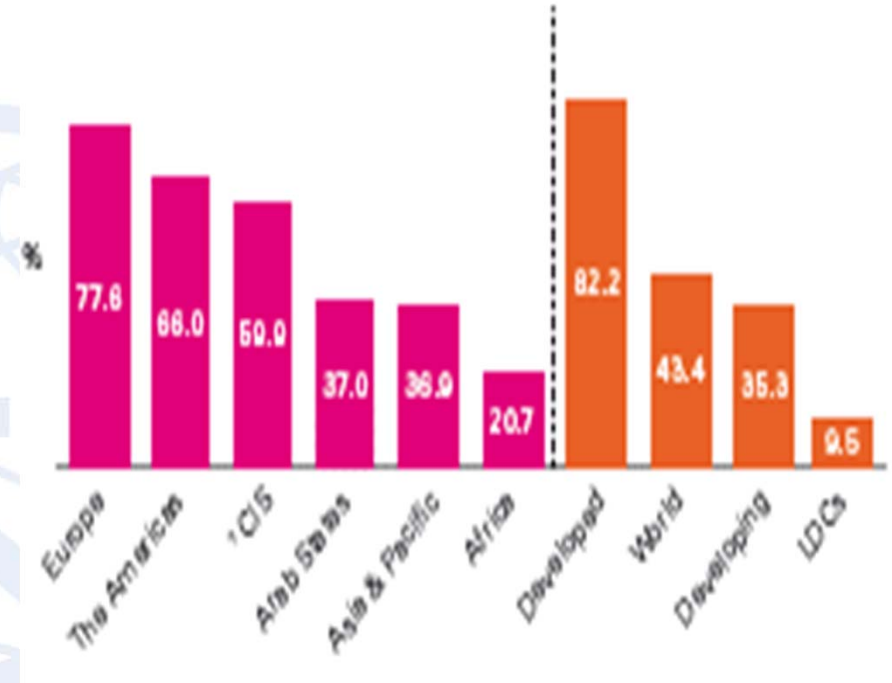


MDGs 2000-2015:
ICT Revolution and Remaining Gaps



Digital Divide in 2015

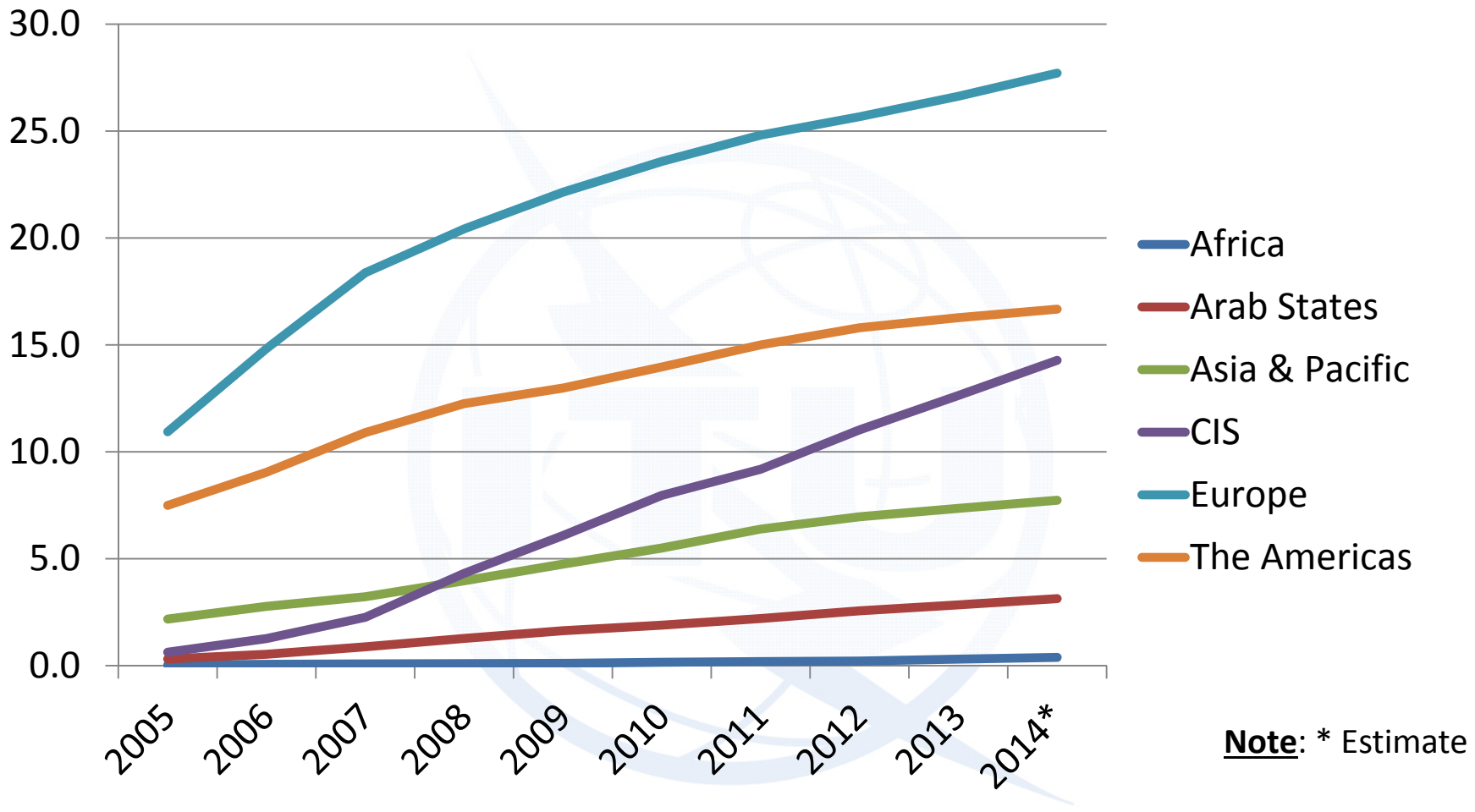




Mobile Broadband Subscribers

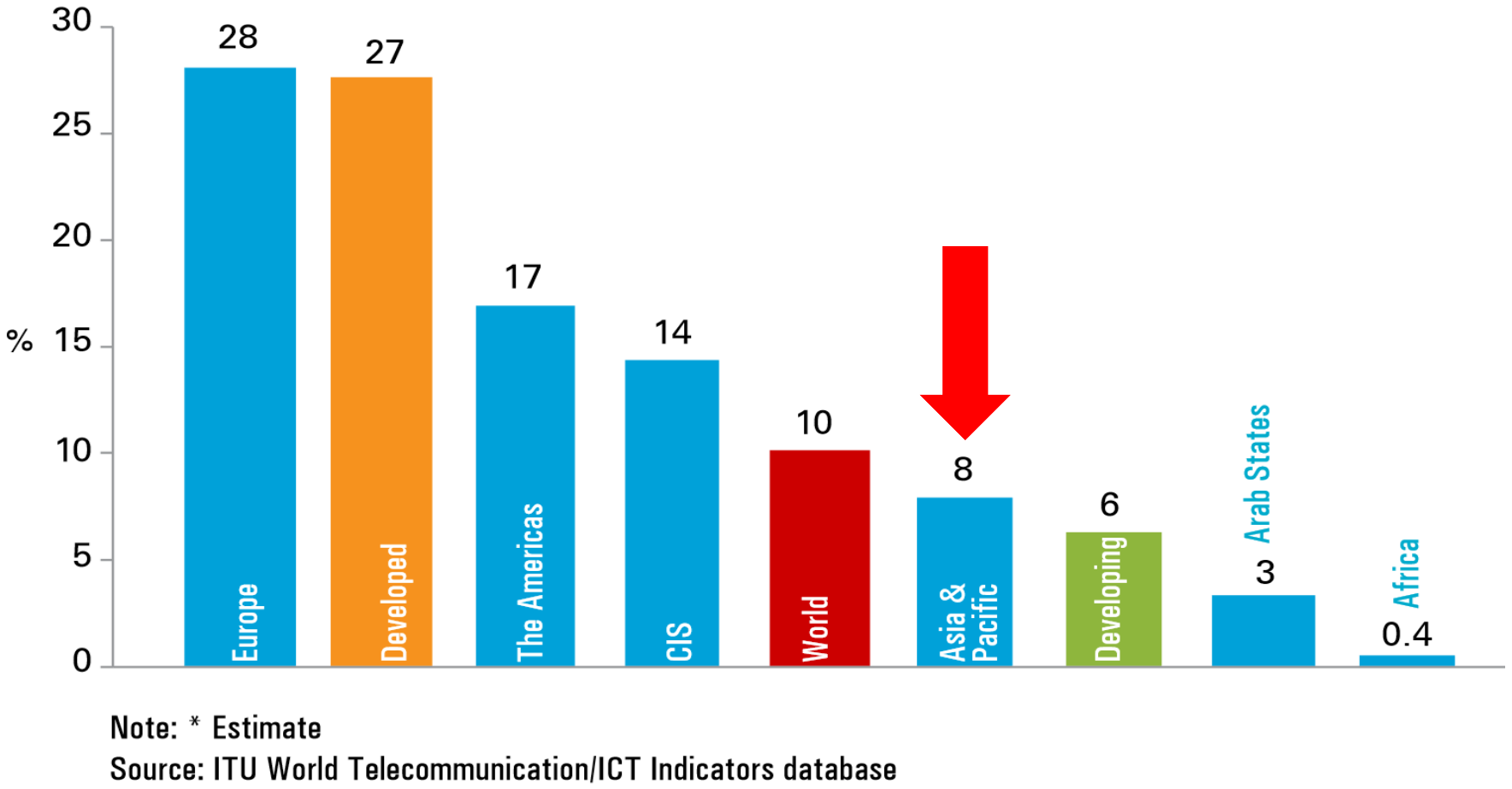
% Individuals using Internet

Demand for Fixed BB?



*Fixed (wired) Broadband subscriptions per 100 inhabitants 2005-2014**

Fixed BB across regions of the world

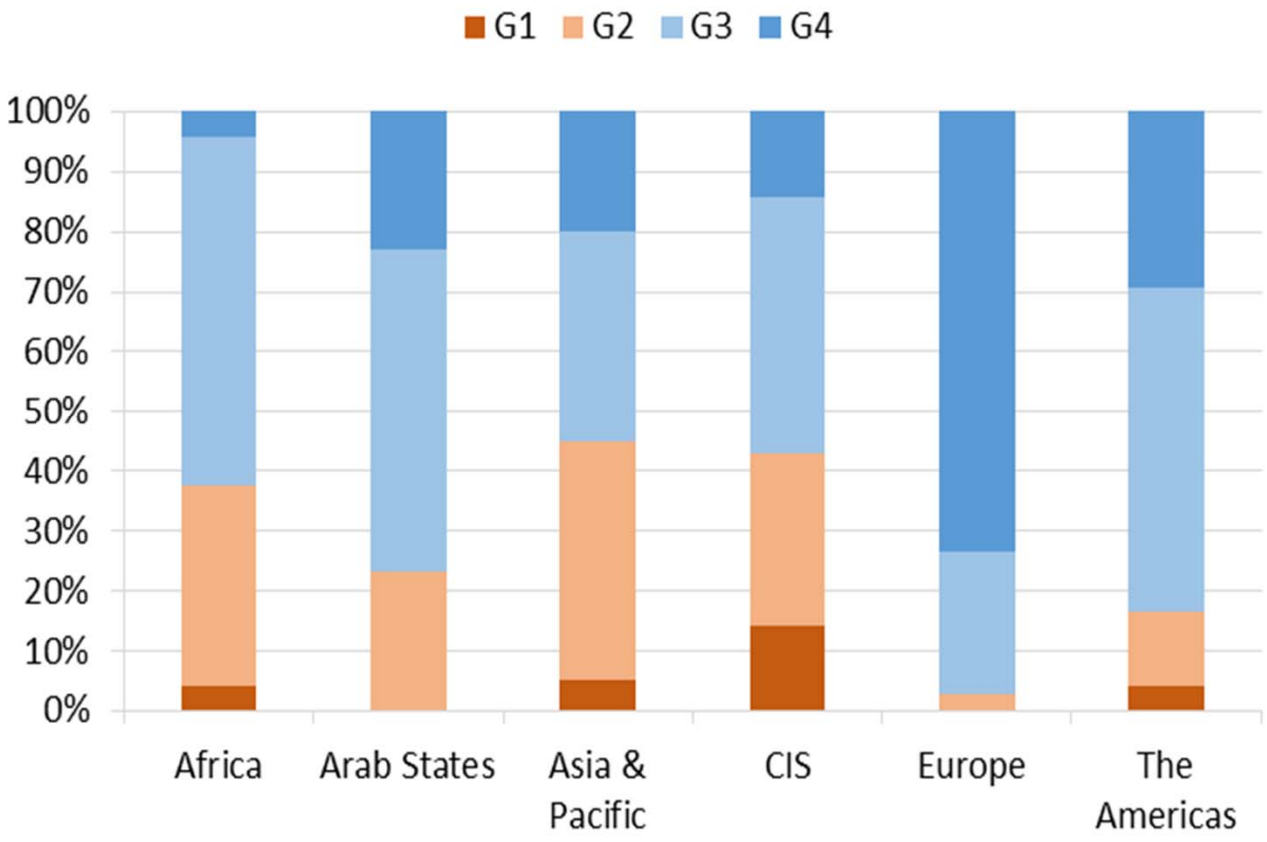


Note: * Estimate
Source: ITU World Telecommunication/ICT Indicators database

Fixed (wired) Broadband subscriptions per 100 inhabitants 2014*

Maturity of Regulation

Beginning of 2014



Source: ITU.

G4: Integrated regulation – led by economic and social policy

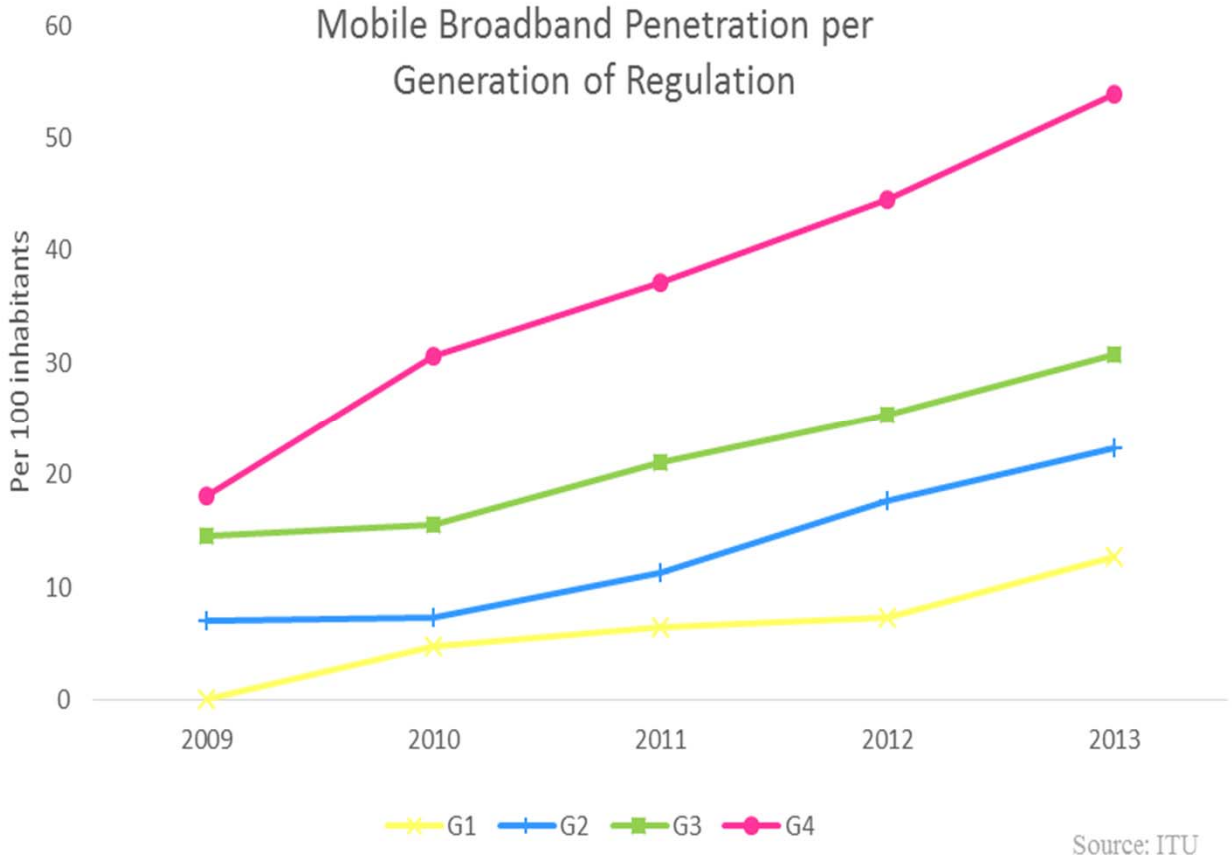
G3: Enabling investment, innovation and access – dual focus on stimulating competition in service and content delivery, and consumer protection

G2: Basic reform – partial liberalization and privatization across the layers

G1: Regulated public monopolies– command and control approach

Better Regulation – Greater Growth?

Evolution of mobile broadband penetration, by generation of regulation, 2009-2013

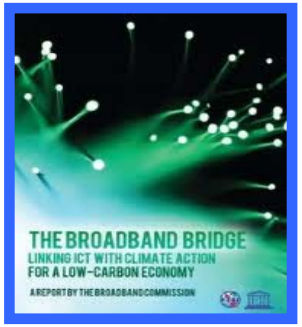


Note: Based on data for 122 countries over the entire period.
Source: ITU.

ITU Initiatives on Broadband

BROADBAND COMMISSION
FOR DIGITAL DEVELOPMENT

"In the 21st century, affordable broadband access to the Internet is becoming as vital to social and economic development as networks like transport, water and power"



Connect 2020 Agenda

For Global Telecommunication/ICT Development

Enable and foster access to and increased use of telecommunications/ICTs

Bridge the digital divide and provide broadband for all

Manage challenges resulting from telecommunication/ICT development

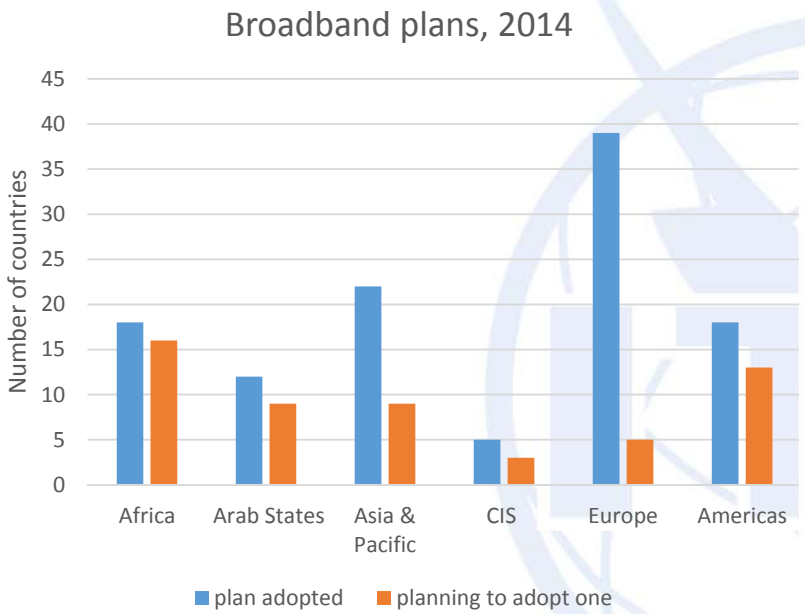
Lead, improve and adapt to the changing telecommunication/ICT environment

ITU: Asia-Pacific Regional Initiatives (2015-2018)

Initiative #1	Special Consideration For LDCs*, SIDSs**, Including Pacific Island Countries, And Landlocked Developing Countries
Initiative #2	Emergency Telecommunications
Initiative #3	Harnessing The Benefits of New Technologies
Initiative #4	Development of Broadband Access and Adoption of Broadband
Initiative #5	Policy And Regulation

* LDC: Least Developed Countries
** SIDS: Small Island Developing States

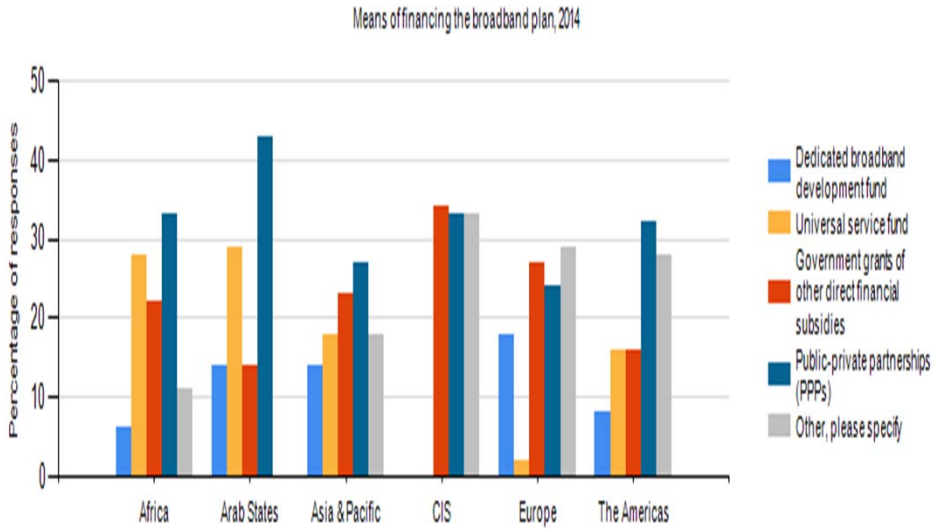
Broadband Plans



Source: ITU Telecommunications/ICT Regulatory Database

- 194 governments worldwide have adopted or are planning to adopt a national broadband policy

Financing Means



Financing: Public-private partnerships and Government funding are the main means of financing broadband deployments in the region

National Broadband Plans

ITU Asia-Pacific Broadband Initiatives

- As of 2014, 11 countries out of the 38 ITU member states in the Asia-Pacific region did not have a broadband policy / plan / initiatives* while some countries need to revise or update their policy
- Under the ASP RI 4, ITU (in collaboration with the Republic of Korea) assisted 16 member states establishing :
  - ✓ Wireless Broadband Master Plans (Myanmar, Nepal, Samoa, Vietnam)
  - ✓ National Broadband Policy/Plan (12 LDCs / developing countries)

Broadband Policies for Vietnam, Samoa, Nepal, Myanmar, Bhutan, Bangladesh, Cambodia , Nepal, PNG, Indonesia, Pakistan, Lao PDR, Vanuatu, Marshall Islands, Brunei, Philippines

Current Status of National Broadband Policy

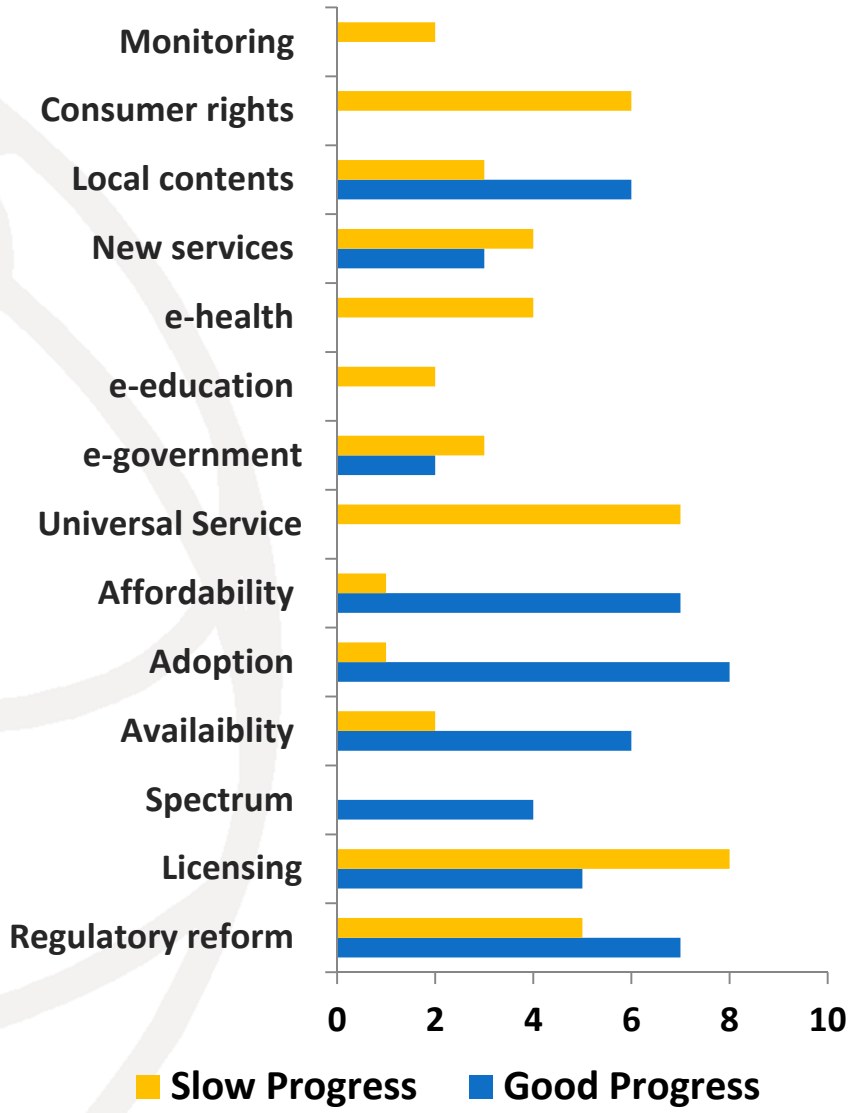
- Currently, **six countries fully approved** the National Broadband Policy at the highest level while **the rest are close** to finalizing their policy
- All these policies set out **clear vision, key objectives and principles** as well as **short to mid-term goals** and detailed **implementation action plans**
- **Comprehensive action plans** consist of a thorough list of issues (& responsible organizations and deadlines) including:
  - Broadband availability target
  - Reducing regulatory burdens
  - Review of licensing/spectrum management
  - Improving adoption, affordability
  - Universal Service Obligations
  - Sector-specific plans (e-government, e-health, e-education, e-agriculture, etc.)
  - Fostering innovation and local service/contents

Status	Country	Broadband Availability Target
✓ Approved	Bhutan	80% of the population
	Brunei D.	80% of the households by 2017
	Fiji	50% of the population by 2016
	Indonesia	75% of the population by 2017
	Papua N.G.	50% of the population by 2018
	Nepal	45% of the households by 2018
Under Review	Bangladesh	Not specified
	Cambodia	90% of the population by 2018
	Lao PDR	60% of the post offices as community access points by 2016
	Pakistan	50% of the population by 2017
In draft	Philippines	Not specified
	Marshall I.	Not specified
	Myanmar	Not specified
	Samoa	Not specified
	Vanuatu	98% of the population by 2018

Monitoring the Progress in NBP Implementation

- **Monitoring survey to assess the latest progress in NBP implementation** was conducted in June 2015 (*work in progress*)
- In the last three years, studied countries made **good progress** in ***broadband adoption, availability*** *and* ***affordability*** while **slow progress** found in **improving *licensing regime, universal services and protecting consumers or QoS***
- **Main barriers** to broadband adoption include:

Barriers to Network Availability	• Geography • Lack of funding for Infrastructure • Lack of market dynamics (competition)
Barriers to Broadband Adoption	• Lack of awareness on broadband benefits • High retail price • Lack of attractive online services



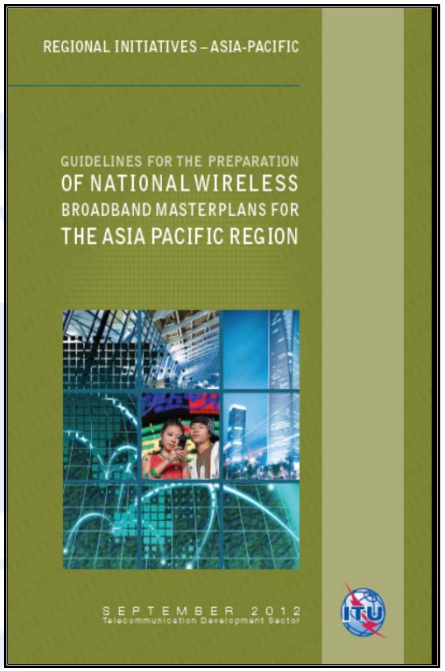
Monitoring the Progress in NBP Implementation: tentative findings

- Countries are **making steady progress** guided by the national broadband policy and its detailed action plans
- Broadband availability and adoption have improved in recent years (due to mobile broadband) while the lack of funding, market dynamics and demand-lack of local content/ services still remain as critical barriers
- Overcoming **regulatory issues and creating enabling environment** are critical success factors
- Countries require further assistance for **stimulating broadband market** by incubating local content, innovative services and entrepreneurship

Guidelines for WBB Master Plan

These Guidelines cover a number of topics of analysis & recommendations including:

- Global and regional context of broadband;
- Current state of play in the country's wireless broadband market;
- Need to ensure legal and regulatory certainty;
- Management of Spectrum Scarcity and the need to ensure Harmonization;
- Technologies and innovations in wireless broadband; and
- Conclusions, recommendation and a suggested roadmap.



Broadband Infrastructure & Applications

Broadband Infrastructure

Interactive Terrestrial Transmission Maps

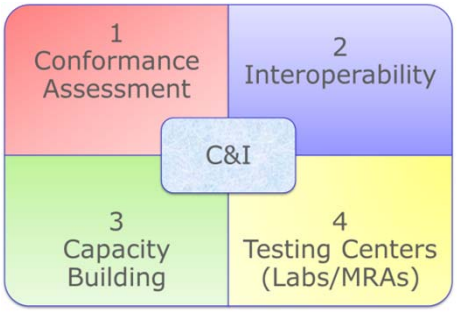
- Core transmission networks are the essential underpinning of broadband access networks.
- The IP connectivity required to deliver these content, services and applications is achieved at certain Tier 1 points of presence (POPs), which are physically located in buildings in certain places.

C&I : Interoperability Framework

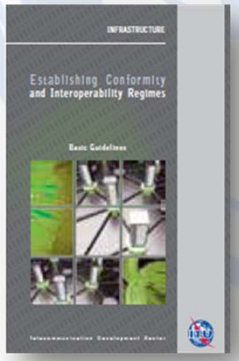
- To tackle different obstacles to the achievement of conformity and interoperability, expressed by member states in ITU`s Decisions.

Regional Presence

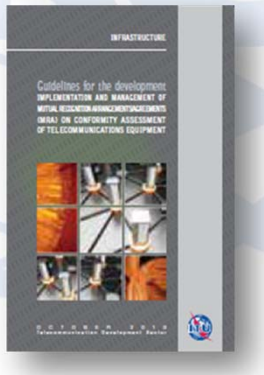
C&I Task Force



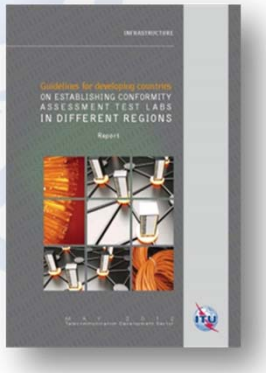
The ITU 4 Pillars



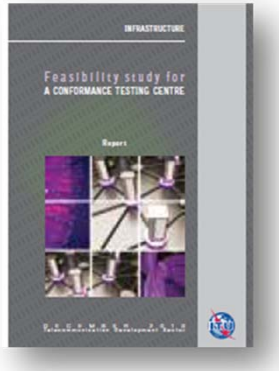
Establishing C&I Regimes Basic Guidelines (2014)



Guidelines for the Development, Implementation and Management of MRA on Conformity Assessment (2013)



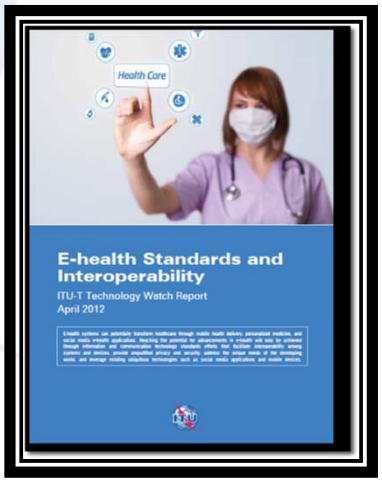
Guidelines for developing countries on Establishing Conformity assessment Test Labs in Different Regions (2012)



Feasibility Study for the establishment of a Conformance Testing Centre (2013)

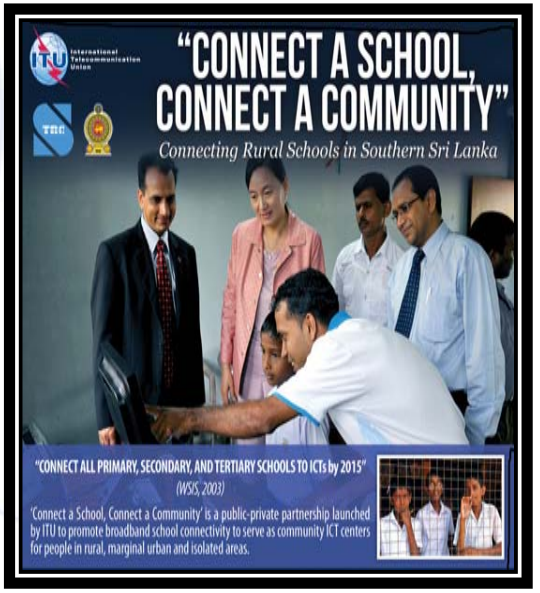
Broadband Applications: e-Health

- About 7 billion mobile users, over 96 % coverage, 1/3rd of world population on Internet and 2 billion broadband users
- ITU WHO
  - ✓ Commission's on Information & Accountability for Women & Children's Health
  - ✓ National e-Health Strategy toolkit
  - ✓ Mobile technologies prevention cure & awareness of NCD , Manila, Philippines
- Interoperable standards on e-Health Study Group 16 : Q 28/16: "Multimedia Framework for e-health Applications."
- Telemedicine / e Health: Nepal
- Mobile Applications : Nepal , Bhutan



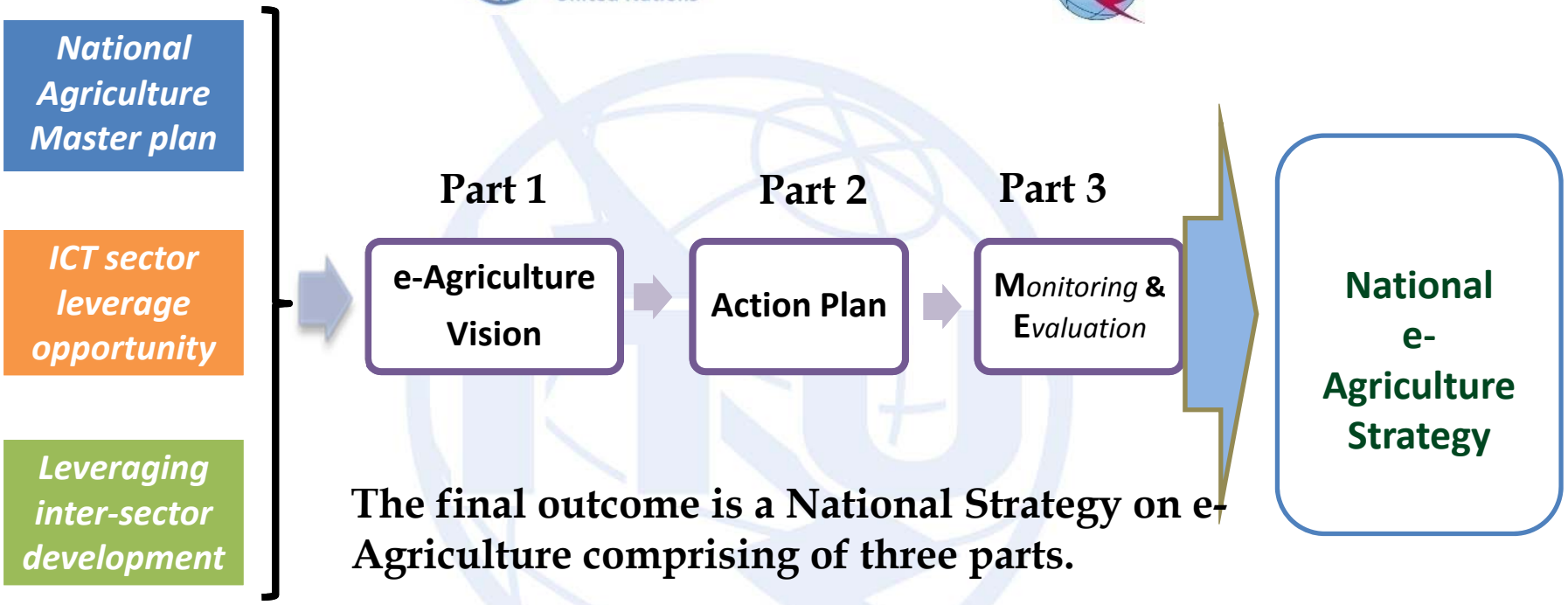
Broadband Applications: e-Education

- Connect a School, Connect a Community Initiative
- Why Connect Schools?
- Best practices in using ICTs for persons with disabilities
- Best practices in using ICTs for women's empowerment
- Best practices in providing ICTs for indigenous persons
- Connected all districts with wireless broadband in partnership with TRCSL, Ministry of Education, Intel etc.
- Final inauguration in Sri Lanka in December 2013



Broadband Applications: e-Agriculture

Food and Agriculture Organization of the United Nations



The final outcome is a National Strategy on e-Agriculture comprising of three parts.

Ongoing assistances to Bhutan and Sri Lanka on development of e-Agriculture Strategy / Masterplan

Implementation ongoing in Bhutan, Sri Lanka, Philippines, PNG

Broadband Applications: Digital Inclusion

- Digital Inclusion
- E Accessibility Tool Kit
- Multimedia Standards
- ITU assisting India, Nepal Afghanistan ICT for PwD
- Inclusive disaster management for vulnerable groups: An Action Guide (2015)

Outcome of the Connect Asia-Pacific Summit

18 November 2013, Bangkok, Thailand

Official Website: http://www.itu.int/en/ITU-D/Conferences/connect/Asia-Pacific/Pages/default.aspx

- Some 625 participants from 37 ITU Asia-Pacific Member States, including 7 Heads of State/Government, 30 Ministers, deputy ministers, and Ambassadors
- Leaders' Vision | Asia-Pacific 2020: Smartly DIGITAL
- Summit Communiqué | Asia-Pacific 2020: Smartly DIGITAL
- About 82 initiatives/projects announced and/or calling for partnerships (see Projects & Initiatives Publication)

Identified Priority Areas

1 Investing in ICT Infrastructure

2 Stimulating Innovation and Creative Use of ICT

3 Encouraging Innovative Public-Private Partnership

4 Promoting Sustainable development through ICT

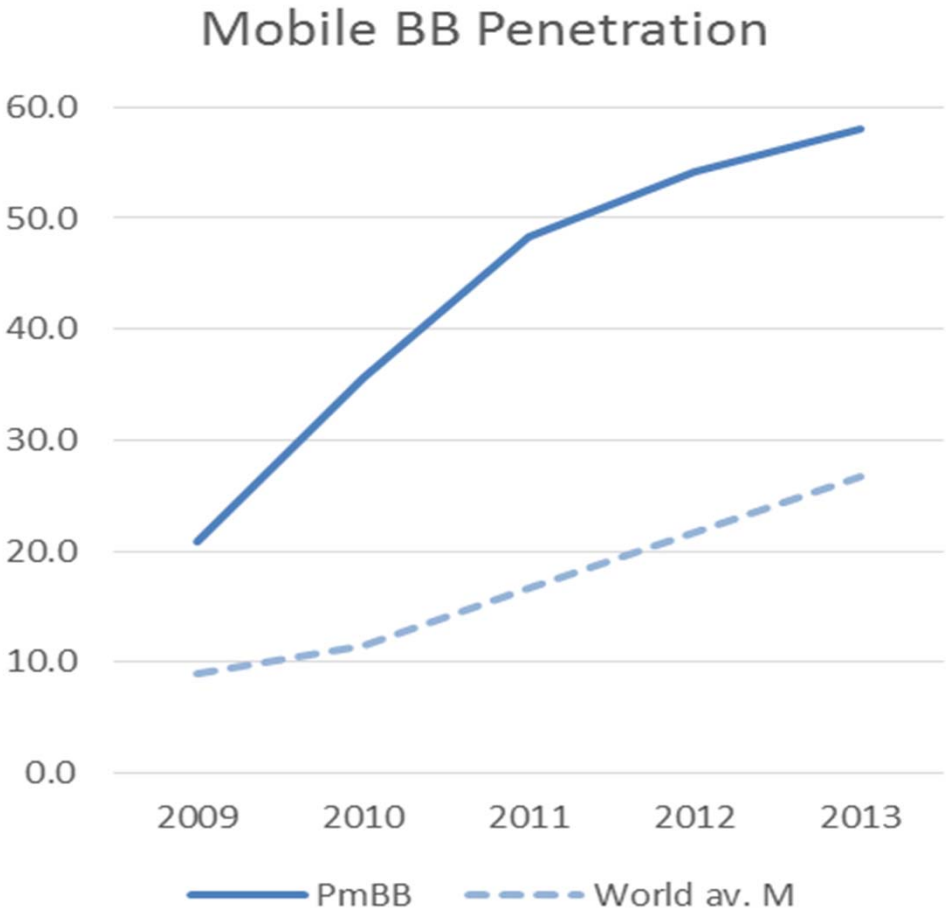
5 Fostering Digital Inclusion

6. Achieving digital literacy and building human and institutional capacity

ITU calls for 'Expression of Interest' in the initiatives/projects

Please visit:
http://www.itu.int/en/ITU-D/Conferences/connect/Asia-Pacific/Pages/ProjectsExpressionofInterest.aspx

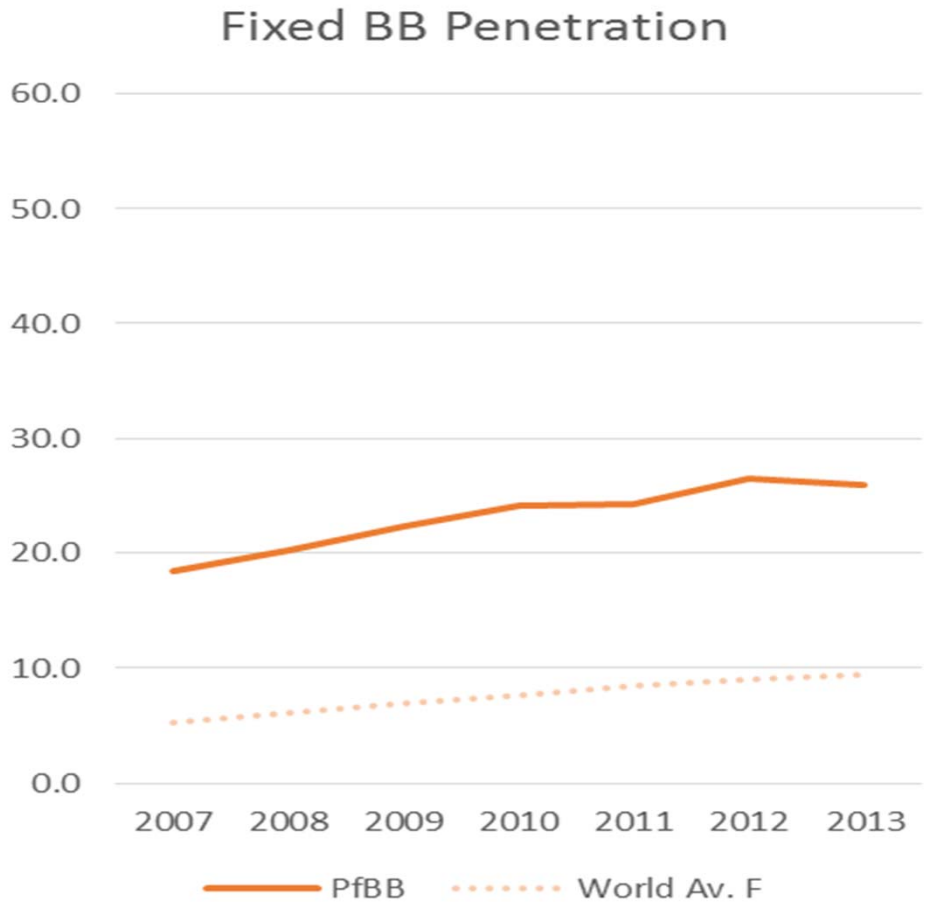
Winning Formulas for Mobile Broadband



- Competition in mobile broadband
- Competition in international gateways
- Mobile Number Portability enabled
- Band migration allowed
- Infrastructure sharing for mobile (either allowed/ mandated), MVNOs
- National broadband plan adopted

Source: ITU

Winning Formulas for Fixed Broadband



- Competition in DSL/cable
- Fixed number portability enabled
- Infrastructure sharing for fixed either allowed or mandated
- Converged licensing framework in place
- National broadband plan adopted

Source: ITU

Conclusions

- Broadband a key national priority for sustainable socio-economic development including job creation
- Fixed and wireless broadband technologies & innovation can play an important role especially in connecting rural and remote areas
- ITU invites partnerships for implementing ITU Asia-Pacific Regional Initiative 4 on Development of broadband access and adoption of broadband

ITU : I Thank U